In the Specification:

Please delete the title and insert the following title:

Precise Flow-Oriented Multi-Angle Remission Sensor.

Page 1, before the first paragraph, insert—Cross Reference to Related Applications

This application is a National Phase Application of PCT/EP2004/014603, filed 22. December 2004, which claims priority to DE103 61 058.8, filed 22. December 2003.

Page 4, delete the paragraph beginning at line 28 and ending at line 34 and substitute the following paragraph:

The liquid sample containing non-isometric particles concerns dispersions. Preferred liquid samples which contain non-isometric particles are liquid pigment preparations. Such liquid This object is achieved by a three-dimensional flow cell for aligning non-isometric particlcs in a liquid sample in two axes, comprising a feed zone for the sample containing particles to be aligned and an outlet for the sample containing particles aligned in two axes, a fluid element of the sample with the dimensions a, b, c being transformed in an expansion zone into a fluid element with the dimensions a x n, b/(n x m), ~~c/m~~ c x m, a being the width, b the height and c the length of the fluid element and n and m being constants (degree of expansion) which depend on the geometry of the flow cell and which signify positive numbers ≥ 1.

Page 8, delete paragraph beginning on line 16 and ending on line 22 and substitute the following paragraph:

If a fluid element of dimensions a, b, c is deformed (a width, b height, c length), because a flow cross section A, C is transformed into n x A, C x m, the result is a fluid element a x n, b/(n x m), ~~c/m~~ c x m~~. The angles or their tangent in the a, c plane are reduced by n x m, the angles in the c, b plane by m^2/n. An equivalent alignment in both axes is preferred, that is to say preferably m x n = m^2/n or n^2 = m, and then both factors are n^3.~~ The angles or their tangent in the a, b plane are varied by 1/(n x n x m), the angles in the c, b plane by m^2/n. An equivalent alignment in both axes is preferred, that is to say preferably (n x n x m) = (m x n x m), respectively n = m, and then both factors are n^3. Thus, for example with n = 5, an entry cross section of A=4, B=25 is transformed into an outlet cross section of A=20, B=1 and aligned in both axes by the factor 125.

Page 8, delete the paragraph beginning at line 31 and ending on page 9, line 2 and substitute the following paragraph:

n and m are the respective level of expansion of the fluid element. The absolute values for n and m depend, inter alia, on how severe the deformation of the fluid elements of a flow is

intended to be. The severity of the deformation is in this case dependent on the intended application and on the size of the non-isometric particles in the liquid sample. In general, n is 1.5 to 7, preferably 2 to 5, particularly preferably 3 to 5, quite particularly preferably 4 to 5, the preferred values being suitable in particular when the flow cell according to the invention is used in photometric measuring devices, in particular reflectance sensors. When the flow cell according to the invention is used in image analysis, for example, other values for n can be preferred. m is preferably ~~n²~~ n, as already explained above.

Page 9, delete the paragraph beginning with line 36 and ending on page 10, line 4, and substitute the following paragraph:
A further subject is a method of aligning non-isometric particles in a liquid sample, the liquid sample flowing through a three-dimensional flow cell according to the present application, a fluid element of the liquid sample with the dimensions a, b, c being transformed into a fluid element with the dimensions a x n, b/(n x m), ~~c/m~~ c x m, a signifying the width, b the height and c the length of the fluid element and m and n beign constants which depend on the geometry of the flow cell and which signify positive numbers ≥ 1.

Page 10, delete the paragraph beginning at line 6 and ending on line 7 and substitute the following paragraph:
In the method according to the invention, it is preferable if ~~m x n = m²/n or n² = m.~~ 1/(n x n x m) = 1/(m x n x m). Preferred values for n have already been mentioned above.

Page 27, delete the paragraph beginning at line 33 and ending on page 28, line 9 and substitute the following paragraph:
According to the present invention, the liquid sample containing non-isometric particles is brought up to the shearing gap (= measuring zone) in a special flow guide. This special flow guide is achieved by the liquid sample traversing a three-dimensional expansion zone according to the present application, and an adjoining measuring zone (shearing gap). As they traverse, the particles are aligned in two mutually orthogonal directions, which both run parallel to the measuring window. Here, a fluid element belonging to the liquid sample and having the dimensions a, b, and c is transformed into a fluid element having the dimensions a x n, b/(n x m) and ~~c/m~~ c x m, a being the width, b the height and c the length of the fluid element and n and m being constants which depend on the geometry of the flow cell and which signify positive numbers ≥ 1. Preferred embodiments of the three-dimensional flow cell and values for n and m have already been mentioned above. When selecting the cross sections and expansion coefficients (a, b, c, n, m), a suitable shearing gap (= measuring zone) must be set.